

AMENDMENTS TO THE CLAIMS

Following is a listing of all claims in the present application, which listing supersedes all previously presented claims:

Listing of Claims:

1. (Original) A trench structure of a semiconductor device comprising:
a first region of a substrate having a first trench, the first trench having a first aspect ratio;
a first filling element having a first insulation material continuously formed on a bottom face and sidewalls of the first trench, and a second insulation material completely filling a first sub-trench formed in the first trench by the formation of the first insulation material;
a second region of the substrate having a second trench, the second trench having a second aspect ratio smaller than the first aspect ratio; and
a second filling element having a third insulation material continuously formed on a bottom face and sidewalls of the second trench, a fourth insulation material formed on a bottom face and sidewalls of a second sub-trench formed in the second trench by the formation of the third insulation material, and a fifth insulation material completely filling a third sub-trench formed in the second sub-trench by the formation of the fourth insulation material.
2. (Original) The trench structure of a semiconductor device as claimed in claim 1, wherein the first aspect ratio is at least about twice the second aspect ratio.

3. (Original) The trench structure of a semiconductor device as claimed in claim 1, wherein the first insulation material is identical to the third and fifth insulation materials.

4. (Original) The trench structure of a semiconductor device as claimed in claim 3, wherein the first, third and fifth insulation materials include an oxide.

5. (Original) The trench structure of a semiconductor device as claimed in claim 1, wherein the second insulation material is identical to the fourth insulation material.

6. (Original) The trench structure of a semiconductor device as claimed in claim 5, wherein the second and fourth insulation materials include a silicon-containing material.

7. (Original) The trench structure of a semiconductor device as claimed in claim 1, wherein the first trench is formed in a cell region of the substrate, and the second trench is formed in a peripheral region of the substrate.

Claims 8-14. (Canceled)